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TO: Helen Shannon, RPM
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FROM: Michael Sivak, Risk Assessor
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DATE: April 13, 2003

RE: Draft Remedial Investigation/Feasibility Study Work Plan SWMU 6, SWMU 7, AOC H,
and AOC J, Former NASD, Vieques Island, PR February 21, 2003

I have reviewed the above referenced document and offer the following comments:

1. General Comment 1: The document consistently discusses the issue of background without ever clearly defining the term and how it will be used. EPA has issued guidance on this topic, "Role of Background in the CERCLA Cleanup Program" OSWER 9285.6-07P, and the workplan should clearly define the role and scope of background, and present a comprehensive plan to incorporate background into the RI/FS and BHHRA processes in a manner which is consistent with this guidance. This document is available at: <http://www.epa.gov/superfund/programs/risk/bkgpoljan01.pdf>

Response:

The background discussed in the RI/FS work plan is about sampling in the upgradient locations for groundwater and upstream locations for surface water as agreed to by the CTC team during background investigation report finalization. Once data is collected it will be addressed according to the EPA guidance during the RI report preparation.

2. General Comment 2: Based on historical sampling, the list of parameters for the RI should be expanded. EPA's hydrogeologist has provided a detailed list of parameters that should be added, based on SWMU/AOC and media.

Response:

Any additional parameters requested by EPA have been addressed in comment responses to specific sites and are addressed in the revised work plan as appropriate.

3. General Comment 3: Region 3 requests an interim deliverable prior to the submission of the BHHRA. This deliverable, the Pathways Analysis Report (PAR), includes RAGS Part D tables 1 through 6 and the text which explains the information in the table. The purpose of this interim submission is to ensure that the Navy is proceeding in a way which is consistent with EPA guidance.

Response:

.As requested the Requested RAGS Part D Tables 1 through 6 will be submitted to EPA prior to completing the risk assessment.

4. Section 2.3: The purpose of this section is to present the result of previous investigations, and these investigations utilized many different screening criteria (ecological, PRGs, RBCs, MCLs, etc.). It may be helpful to identify the specific screening levels that were exceeded when presenting the information.

Response:

. Since the criteria will be updated with time, and CTC suggests changing them at the time of draft RI, the latest criteria available at the time of RI report preparation will be used. These criteria will be EPA Region 9 PRGs for soil and groundwater human health protection, ambient water quality criteria for surface water for human health and ecological protection, and MCLs for groundwater and ecological soil, sediment, and surface water quality guidance values from EPA and for missing chemicals other EPOA recommended sources will be used. Section 3.1 on ARARs includes references to these criteria. Text has been revised in Section 5.0 to describe data screening process for COPC selection.

5. Page 2-5, Section 2.3.1.3: The text in the first paragraph (and elsewhere in the document) uses the terms "risk-based concentration" (RBC) and "preliminary remediation goal" (PRG) interchangeably, which is incorrect, the text should clearly state which screening levels are used and use the terms consistently.

Response:

Since the screening criteria for human health are from EPA Region 9 PRG tables, they are PRGs. Text has been edited to refer to them as PRGs consistently.

6. Page 2.7, Section 2.3.3.3: Since AOC H had historically been used in fire fighting exercises, and since the document states that rubber tires were set on fire to simulate structure fires, it is peculiar that no PAHs were identified in any media. Were PAHs included in previous sampling events? If not, they should be included for all media as part of the RI sampling activities.

Response:

As reported in Section 4.0 of Phase II PA/SI report, PAHs were analyzed for in 16 surface soil and 16 subsurface soil samples, and while low levels were detected in some of the samples only two samples had slight exceedance over the residential PRG value of 0.062 mg/kg at detected concentrations of 0.074 mg/kg and 0.12 mg/kg concentrations. PAHs were not detected in subsurface soil.

7. Page 2.7, Section 2.3.3.3: The third paragraph of this section states that several metals were detected in groundwater including vanadium, thallium, and antimony, and the presence of these metals is attributed to natural occurrence in the soil. Any reference to screening against background should be removed. However, if the Navy thinks that comparisons to background will be discussed in the HHRA and the RI/FS, then they should perform this task consistent with EPA's background guidance. To the extent that

this would require additional sampling (i.e., due to statistical requirements), background samples should be collected.

Response:

The referenced text is what was reported in the expanded Phase IIPA/SI report, which predates the current EPA guidance on background evaluations. This section is a recantation of site investigation history as explained upfront in Section 2.0. Additional background data are proposed in Section 4, which includes background samples for groundwater, surface water and sediments as agreed to with the CTC team during background investigation report review.

8. Page 2-8. Section 2.3.4.3: In the third paragraph of this section, the text states that mercury was detected in the surface water at concentrations very near or at the detection limit. The text then states that the mercury results are "...likely [a] false positive...." Presumably, the data have been validated, and any estimated or unusable data would have been reported as such. The text should be revised to state more objectively the results of the expanded PA/SI for AOC J.

Response:

The text is from a previous report that has been reviewed by EPA. A more detailed discussion of the data, including the data validation will be provided in the RI.

9. Page 3-1. Section 3.1: Please note that Region 2 uses the "combined pathway" value from the Region 9 PRG tables when screening contaminants for inclusion in the BHHRA.

Response:

10. *The risk assessment process that was approved by EPA for the No Further Action Report will be implemented for the RI and will be reviewed by EPA prior to conducting the risk assessment. However, the details for this process are not included in this work plan.* Section 3.2: Since the purpose of this section is to present the conceptual site model and introduce the sampling plan for the media at the areas of concern, it may be helpful to indicate the specific screening criteria that were exceeded in previous investigations. This would provide additional context to the decisions to resample certain points or to not sample other areas at which contaminants had been detected.

Response:

*An introduction paragraph **will** be added to Section 3.2 to clarify the purpose of the CSM section.*

11. Page 3-4, Section 3.2.4: The second paragraph states that perchlorate was detected in a groundwater sample, the well was resampled, and that perchlorate was not detected. Therefore, perchlorate is not on the list for sampling as part of the RI. However, only two samples were analyzed for perchlorate: one had a reportable concentration, and the other was nondetectable. A confirmatory sample should be collected from this well.

Response:

The text does not say or imply that 'therefore perchlorate will not be analyzed further.' In Section 4.0 where actual sampling and analysis for the 4 sites is discussed, perchlorate is included for future analysis in all the groundwater samples as summarized in tables.

- I. Figures 3-1, 3-2, 3-3, and 3-4. Conceptual Site Models: If groundwater is used as a drinking water, then inhalation of volatiles is likely. Therefore, the CSMs should be revised to include inhalation of groundwater for potential human receptors for industrial, residential, and recreational populations. If no volatiles are identified above screening levels, then the pathway is not complete; however, this pathway should be included in the CSMs.

Response:

Suggested change has been made to the revised figures in the work plan..

13. Figure 3-2: First, the typographical errors in the key should be corrected. Second, superscript 1 indicates that no surface water is within the site. Does this mean that there is never surface water within the site boundaries? Or is the surface water intermittent and present only after rain events? Please clarify the text or reference the text that more clearly describes the surface water in SWMU 7.

Response:

Typographical errors have been corrected in the figure in the revised work plan. The site is located on a very steep slope, with very little to no potential for standing water. Text has been edited to clarify further in the revised work plan.

14. Section 4: Please note that in order to develop appropriate statistical values for the upperbound of the mean concentration (i.e., 95% upper confidence limit of the mean) for the BHHRA. Region 2 recommends a minimum of 10 samples. For data sets of less than 10 samples, the maximum detected concentration is often used as the exposure point concentration for the risk assessment; this value may potentially overestimate risks and hazards. Therefore, in order to most accurately quantify risks and hazards it may be prudent to collect additional samples so that datasets have a minimum of 10 samples.

Response:

Comment noted. Between the samples proposed in this report and previous expanded PA/SI, most of the soil and sediment samples will be greater than the suggested number of samples. Where the number of samples is less than 10 the maximum detected concentration will be used in the risk assessment..

15. Page 5-1, Section 5.2: First, please note that EPA has updated the RAGS Part D guidance. This guidance which includes new RAGS Part D Tables, is available at:
<http://www.epa.gov/superfund/programs/risk/ragsd/index.htm>

Second, please note that the primary source for exposure parameters is still "Supplemental Guidance to RAGS Part A: Standard Default Exposure Factors (Interim Final) (OSWER Directive: 9285.6-03) (March 1991).

Response:

The latest guidance will be used ~~for~~ the future risk assessments.

16. Page 5-2: Section 5.2: The text states that the BHHRA will include a discussion of RGOs. This information should not be included in the BHHRA, but rather is more appropriate for discussion in the FS.

Response:

Comment noted. The RGOs are logically calculated at the end of risk assessment where in the RI report or beginning of FS. This work plan is ~~for~~ both RI/FS.

17. Page 5.2.2: When identifying potential future land use scenarios, it may be helpful to reference the EPA guidance document "Land Use in the CERCLA Remedy Selection Process" (OSWER Directive: 9355.7-04) (1992).

Response:

The reference has been added to the list of references.

18. Page 5-3: EPA (ORD-National Exposure Research Laboratory) has developed a statistical software package, PRO UCL V.2., that is recommended when developing EPCs. This package provides appropriate tests for distribution testing as well as for developing EPCS for data which are nonparametric. Please consult the EPA Region 2 risk assessor for further information.

Response:

The EPA tool for exposure point concentration estimation will be used ~~for~~ future RI reports for these sites, either the recommended version, or a later version, if another one is released by that time.

19. Page 5-3: In the 7th paragraph, the text states. "[within each of the three areas described in Section 2.1..... Please revise the text to include all 4 areas of investigation.

Response:

The typographical error has been corrected to 'the four areas.'

20. Page 5-4. Section 5.2.3: The hierarchy for toxicity data should be IRIS, then NCEA. Toxicity data should not be referenced to either the Region 9 PRG tables or the Region 3 RBC tables. Due to the length of time since HEAST has been updated, Region 2 now uses NCEA for any toxicity data not on IRIS. Please consult the EPA Region 2 risk assessor as soon as the COPCs are identified (RAGS Part D table 2 series) so that NCEA can be contacted to begin researching toxicity data.

Response:

Any COPCs without toxicity criteria in IRIS will be provided to EPA Region II to obtain interim toxicity values from NCEA, as suggested by this comment as was done in the past ~~for~~ the NFA report.

21. Tables 5-1.5-2.5-3: These tables have not yet been reviewed. Region 2 will provide comment as soon as the review is complete.

Response:

As suggested by the comment, these tables will be provided ~~for~~ EPA informal review, as soon they are ready after COPCs are identified.

22. **Section 7:** Please note that pages are missing from Section 7.

Response:

The missing 1-page has been added to the revised work plan.